

Incorporating Islamic Environmentalism in Approaches to Conservation in the Trans-Himalaya

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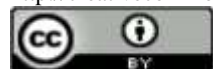
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Abstract

Conservationists increasingly acknowledge the value of co-productive conservation efforts that incorporate the Indigenous perspective. In the Trans-Himalayan context, they have begun to incorporate the Buddhist perspective in recent interventions; yet, there is an omission of Islamic environmentalism in these conversations. This omission is even more glaring when one considers that Muslims make up a significant percentage of the Indigenous population of the Trans-Himalaya. A review of the literature reveals a considerable body of Islamic scholarship on sustainable resource management in extremely harsh climates. In fact, co-productive conservation efforts in collaboration with local Muslim communities elsewhere in the world have been very impactful. While scholarship on the history of Islam in the Trans-Himalaya is limited, historians agree that, rather than being forced upon a passive Indigenous population, the widespread adoption of Islam was an active choice by a population that had plenty of exposure to different ideas and belief systems via trade. Supplementing these findings with qualitative research at the grassroots level among the Dard-Shin Scheduled Tribe in the Trans-Himalaya, the authors find further evidence of the syncretic blending of Indigenous and Islamic beliefs, deployed in service of effective natural resource management. It is, thus, proposed that future conservation efforts in this region would be well advised to adopt a more expansive approach to the Indigenous perspective.

Keywords

Islam; Trans-Himalaya; Conservation; Indigenous; Co-productive conservation; Scheduled Tribes

Introduction

For several decades, conservation scientists have acknowledged the importance of participation of Indigenous communities in conservation. Nonetheless, “Indigenous” is often a term of art, and who gets to be construed as such depends on external political factors. The authors’ work in the Trans-Himalayan region of Kargil,

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Ladakh, focuses on the documentation of native medicinal plant species and the improvement of rural livelihoods via agroecological intervention. During this process, the authors have discerned a troubling erasure of Muslim communities and traditions within the larger conversation around conservation in the Himalayas, which appears to be based on the assumption that one cannot be both Muslim and indigenous to the region. It is important to recognize that although such communities are officially classified by the Indian government as belonging to Scheduled Tribes,¹ Islam is their primary organizing principle. Islamic teachings on living harmoniously with nature in a resource-scarce region, combined with the traditional knowledge of their ancestors, have played an important role in enabling Ladakhi Muslims to thrive in the harsh environment. Thus, the ever-evolving practice of Islam in the Trans-Himalaya has the potential to be an effective tool in resource management in an area at the forefront of climate change, and conservation practitioners ignore it at their peril.

A conclusion is arrived at based on a review of the literature, the authors' observations in the region, the authors' experiences working with communities at the grassroots level, and the well-documented evidence on how improving communication with key local stakeholders increases likelihood of success in a conservation intervention. Although the terms "Trans-Himalaya" and "Ladakh" are deployed to emphasize the applicability of the thesis to a larger geography, the focus is primarily on Kargil, as this is the region where the authors have conducted their research.

Co-Productive Conservation

For too long now in the Trans-Himalaya, there have been multiple instances of impressive conservation policies that fail to translate into the anticipated-for impact on the ground. Those who study such failures generally attribute them to an inadequate consideration of the social aspects of conservation (Bennett *et al.*, 2017). Conservation is "primarily not about biology, but people and the choices they make" (Balmford and Cowling, 2006; Wright, 2015). Given the people-centric nature of conservation, Catalano *et al.* (2019) identify poor communication as one of the primary causes of policy failure. Toomey, Knight and Barlow (2016) go a step further and argue that the research-implementation gap can only be bridged when scientists acknowledge that, though we live in the information age, human decision making is as much influenced by objective science-based evidence as it is (if not more so) by existing beliefs and mental models. "Effective decision-making," they write, "is based upon clear understandings of values, knowledge, rules, behaviours and actions, and the complex interactions between them" (Toomey, Knight and Barlow, 2016). The extent to which the local cultural context is acknowledged and given recognition during the process of research can have a significant impact on the degree to which the findings of that research are accepted by the local community.

For example, in Muslim-majority Zanzibar, the Islamic Foundation for Ecology and Environmental Sciences, headed by the Islamic environmentalist Fazlun Khalid, developed and implemented an Islam orientated environmental education programme amongst the fishing communities with great effect (Khalid and Thani, undated). Elsewhere within the Islamic world, the issuance of *fatwas* (prohibitions) has also been

¹ <https://www.constitutionofindia.net/articles/article-342-scheduled-tribes-2/>

able to put a stop to polluting practices where government regulation has failed (Schwencke, Berger and Drees, 2015).

In response to the need for both science- and community-based understandings of environmental issues and the solutions thereof, Buschman (2022) advocates for co-productive conservation, i.e. the co-production of knowledge and public services, which means to produce ethically conscious, culturally relevant and fully knowledge-based approaches to biodiversity conservation. This approach, she further elaborates, “must be equitable and meaningful and in line with Indigenous sovereignty and self-determination; must be open to traditional methods of management and conservation as guided by Indigenous knowledge and ways of life and must not unnecessarily impede traditional practices; and must trust and respect Indigenous knowledge, its methodologies, and its validation and evaluation processes as legitimate and take Indigenous direction on how Indigenous knowledge and science should be partnered in the creation of a shared evidence base.” Buschman (2022), like Toomey, Knight and Barlow (2016), emphasizes that Indigenous participation in conservation should not be an obligation; instead, there should be a recognition by scientists that broadening the evidence base to include Indigenous knowledge will increase the likelihood of success.

In Buschman (2022)’s envisioning, co-productive conservation entails six processes:

1. Co-planning, or bringing indigenous partners on at the planning and conceptualization phase;
2. Co-prioritizing, or setting the agenda together with indigenous partners;
3. Co-learning, or synthesizing the information together in a way that is both science and traditional knowledge based;
4. Co-managing, or the collective allocation of resources for the project;
5. Co-delivering, or jointly conducting researching as well as establishing community-based monitoring; and lastly,
6. Co-assessing, or conducting a joint evaluation of whether the project met its objectives.

Matters get a bit more complex in the Indian context (Xaxa, 1999). “Indigenous” is not mentioned in the Indian constitution, as the government considers all Indians to be indigenous to the country. It is also for this reason that “Indigenous” is not capitalized in much of the Indian literature, in a break with standard practice in North America.² The nearest Indian equivalent to the North American term is “Scheduled Tribe”, which is defined in an almost comically circular manner in Article 342 (1) of the Constitution³ as “the tribes or the tribal communities or parts of or groups within tribes or tribal communities, after the consultation with the Governor thereof, which the President may specify by public notification.” In other words, a Scheduled Tribe is one that the government deems as such.

Thankfully, over time the government and courts have shed a little more light on which groups may be classified as Scheduled Tribes. Typically, they live apart in the mountains, lead an excluded life and are not fully assimilated into the mainstream. *They may belong to any religion* (Bodhi and Darokar, 2023). Possibly because of

² For more on North American practice, one may refer to Younging, G. (2018) *Elements of Indigenous style: A guide for writing by and about Indigenous people*. Canada: Brush Education Inc.

³ <https://constitutionofindia.in/article-342-of-indian-constitution/>

overlapping characteristics, and as the practice of conservation has become more globalized, terms that are more suited to a particular context elsewhere gradually snake their way into popular parlance within India. Thus, it has come to pass that practitioners often use “Indigenous” interchangeably with “Scheduled Tribes” in India. It should also be noted that the rights conferred by a Scheduled Tribe designation are discretionary, with some tribal areas getting far more autonomy than others.

Notably, over 80% of the population of Kargil, Ladakh identify themselves as belonging to a Scheduled Tribe (though they have been granted relatively limited autonomy over their area). In an overlap of identities, 76.9% of these Kargilis also identify themselves as Muslims. It stands to reason then that a significant majority of Kargil’s population is both Muslim and tribal/ Indigenous. And, when one takes into consideration all Ladakh, according to the 2011 census, Muslims make up 46.6% of the population, with Buddhists at 39.7% and Hindus at 12.1%.⁴ Regardless of demographic realities, the image most frequently conjured upon mention of the Indigenous communities of the Himalayas is that of the crimson-clad Buddhist monk against a stark white landscape, thanks in no small part to Hollywood films like *Seven Years in Tibet* and *Kundun*. One might speculate that the visual appeal of such imagery is the primary reason for its popularity with filmmakers.⁵ Nonetheless, it erases from public consciousness a very significant group of non-Buddhist Indigenous Himalayan dwellers: its Muslim population.

This erasure extends beyond movie theatres to academia, whether in Islamic or environmental studies department, where it is uncritically held that the geography of Islam is limited to the desert ecologies of the Middle East, and “that Muslims are outsiders to the Himalaya, and that the Himalaya are a peripheral site of Muslim cultures and traditions” (Fewekes and Sijapati, 2021). And yet surely Islam, with its origins in a resource scarce region like the Arabian Peninsula, would be especially concerned with the sustainable and just distribution of scarce resources. Without taking away anything from Buddhism’s contribution to an ecologically conscious way of life in the Himalayas, let it be noted that Buddhism is no less “foreign” to this region, having originated in the much warmer subtropical foothills. Research in Ladakh by Bhatia *et al.* (2016) shows that professing the Buddhist faith does not predispose one more favourably towards the environment any more than professing the Islamic faith. The historian Richard C. Foltz (2003) takes a critical look at Islam’s claims to being an eco-religion. He suggests that contemporary Muslim writers on the issue are more concerned with environmentalism as a social justice issue than for its own sake. But if one could point to a single reason for Islam’s invisibility in modern environmental discourse, it would be the poor environmental records of the two modern-day oil-producing theocracies in the Middle East, namely Iran and Saudi Arabia. Witness, even as Dubai hosts the latest round of UNCCCCF’s COP 28 talks, the steady flow of articles

⁴ District Statistics & Evaluation Office (DSEO) Kargil (2022). *Statistical Handbook 2021-22: District Kargil*.

⁵ For more on how the West has influenced popular perceptions of the eco-Buddhists of Ladakh, see Butcher, A. (2015). Ceremonial Activities in Development: the Spiritual ‘Problems’ for Ladakh’s Secular Encounter. *The Tibet Journal*, 40(2), 195–218. Available at <http://www.jstor.org/stable/tibetjournal.40.2.195> [accessed 10 March 2024].

in the Western press that are almost incredulous that an Arab country could be entrusted with any kind of environmental stewardship.⁶

The ecotheologian Mawil Izzi Dien (2003) describes the environmental catastrophe in Saudi Arabia, more closely identified than any other place with a “pure” Islam. In the wake of oil discovery, Saudi agriculture, itself a miracle, collapsed. As a result, many species of flora and fauna, which had come to depend on centuries-old agricultural practices, lost their habitats. Dien (2003) writes, “The sudden, almost shocking introduction of the industrial age to these countries was not supported by a value system compatible with the prevalent Islamic values.” He posits that this led to a values vacuum, which people attempted to fill with ever-increasing over-consumption. It was not uncommon in those days to find abandoned cars by the side of the road, barely a few years old, as their former owners moved on to the next shiny new thing.

It is widely held that the Syrian war was the first climate war of our time, following the path of drought-migration-conflict (Angermayr, Dinc and Eklund, 2023). The shadow of that war falls on Iran’s current environmental crisis. In 2020, the country saw a series of protests over water shortages in Khuzestan, a region that used to be water rich. The water crisis is exacerbated by decades of resource mismanagement. Iran also has very high levels of air pollution because of the widespread use of poorly refined oil and outdated emission technology. As a result of environmental decline in agricultural areas, the pace of rural-urban migration has increased in recent years.⁷ The country now has a large and restive under-employed youth population, whom many blame for the anti-regime protests in 2023.⁸

Still, the careful scholar should distinguish between Muslim environmentalism and Islamic environmentalism, as Foltz (2003) reminds us. The Iranian and Saudi response to the curse and blessing of oil are examples of *Muslim environmentalism*, which is not, however, the same thing as *Islamic environmentalism*. The latter originates in the writings of the Qur’an, while the former is practiced by discrete groups of Muslims and is very much shaped by local conditions. The shortcomings of one should not be conflated with the other.

Within the Indian subcontinent, a key point of difference between Islamic and Hindu-Buddhist environmental traditions has to do with vegetarianism. While Hinduism/Buddhism is widely known for preaching *ahimsa* or non-violence, this is not the case with Islam. Islamic celebrations such as Bakr-id, which entails the slaughter of goats, tend to contribute to the perception that environmental consciousness does not top the list of Islamic concerns.

⁶ Saudi Arabia is trying to block a global deal to end fossil fuels, negotiators say. *New York Times*, December 10, 2023; Boycott COP 28: Holding a climate conference in Dubai is absurd and dangerous. *Le Monde*. September 30, 2023.

⁷ Shirin Hakim: Iran’s environmental challenge. Centre for Strategic and International Studies. July 11, 2023. Available online at <https://www.csis.org/analysis/shirin-hakim-irans-environmental-challenge> [accessed 13 December 2023].

⁸ Context of protests: Economic woes. The Iran Primer, United States Institute of Peace, October 12, 2022. Available online at <https://iranprimer.usip.org/blog/2022/oct/12/context-protests-economic-woes> [accessed 13 December 2023].

On closer inspection, there is plenty of non-vegetarianism within Hindu India, as well as in Buddhist culture throughout East and Southeast Asia. Moreover, on the Tibetan plateau, where the ground is frozen solid for at least six months in a year, historically meat has played a crucial role in providing basic nourishment for all residents, regardless of religious affiliations. Simultaneously, there is nothing in Islam that prohibits vegetarianism.⁹ Nonetheless, since the tendency is always to define oneself against the other, Islam in India becomes the non-vegetarian alternative to vegetarian Hinduism. It becomes concerned with distributive justice among the disenfranchised, rather than with upper caste “luxury concerns” such as environmentalism.

Key Concepts in Islamic Environmentalism

Before jumping into the particularities of Muslim environmentalism in Kargil, it would be helpful for the non-Muslim readers to gain familiarity with relevant principles of Islamic environmentalism. To understand again why this might be necessary, one must revisit the words of James Gustave Speth, former dean of the School of Forestry & Environmental Studies at Yale University and senior advisor on environmental issues to US presidents Carter and Clinton, who has been widely attributed to say: “I used to think the top environmental problems were biodiversity loss, ecosystem collapse, and climate change. But I was wrong. The top environmental problems are selfishness, greed, and apathy” (Sterling, 2019). Speth went on to say that “to deal with those issues we need a spiritual and cultural transformation – and we scientists do not know how to do that”.

Speaking for religion, the Islamic philosopher of science, Sayyed Hossein Nasr (2000), writes that religious perspective illuminates a profound interconnection between humans and the natural world, emphasizing adherence to a shared universal order. He urges contemporary individuals to embrace traditional religious perspectives on nature and align their actions with the natural order, mirroring the harmony observed by other beings: “We must realize that the traditional religious wisdom applies to us as much as it did to our remote ancestors, and that humanity must be seen, as it once was, as an inseparable part of the natural world, as God’s creation and subject to the same divinely ordained laws that must be observed if we are to maintain its fundamental order” (Nasr, 2000)..

Āyāt

The transcendent and spiritual reality of nature is a key tenet of Islamic environmentalism. Everything in nature is seen as a sign of God (Āyāt). Because nature cannot explain its reason for being, its existence points to some transcendental entity. In the Islamic view, nature consists of the attributes of God, and the purpose of the cosmos is to make him known (Ma’rifa). Muslims believe that everything in the natural world is a manifestation of God's creation. Just as footprints indicate someone's presence, the existence of nature serves as evidence of God's existence. The belief in Allah as the Creator of all things is a fundamental concept, as emphasized in the Qur’an, which is the

⁹ For a fascinating discussion on this topic, see Adams, Jacqueline, ‘Meat and Islam: How vegetarians in Egypt navigate faith and contemporary food ethics.’ Master's thesis, 2018. Harvard Extension School. Available online at <http://nrs.harvard.edu/urn-3:HUL.InstRepos:42004032> [accessed 13 December 2023].

holy book of Islam. Surah Al-Hashr (59:24)¹⁰ specifically mentions that Allah is the Creator, the initiator, and the supreme fashioner. This concept is reinforced in other verses throughout the Qur'an. In Surah Al-An'am (6:102)¹¹, it is stated that Allah is the Creator of the heavens and the earth. In Surah Al-Rad (13:16)¹², it is mentioned that Allah is the best of Creators. These verses, along with many others, highlight the role of Allah as the sole Creator and guardian of all things.

Do they not realize that Allah, Who created the heavens and the earth and did not tire in creating them, is able to give life to the dead? Yes, He is certainly Most Capable of everything (Qur'an: Surah Al-Isra. 17:99).¹³ In fact, nature is one of the two Āyāt of God, the other being the Qur'an itself. The Qur'an is a revelation from God to humankind, and it serves as a written form of God's words. It provides guidance to Muslims and offers profound insights into the relationship between Allah, the heavens, the Earth, and the human beings as his creation. The Āyāt of the Qur'an emphasize the intricate design and balance (Mizan) in cosmos and nature, indicating that everything in the universe along with the earth and environment is a creation of God. "It is a revelation from the One Who created the earth and the high heavens" (Qur'an: Surah Al-Taha. 20:4).¹⁴

The historian S. Nomanul Haq (2001) writes, "Nature in its Qur'anic conception is anchored in the divine, both metaphysically and morally. The expression is strong: 'But to God belongs all things in the heavens and on the earth; and He is who encompasseth (Muhit) all things (4:126)'; note that the word Muhit can also be translated legitimately as 'environment'. So we see that when the Qur'an's notion of nature is reconstructed in the larger framework of this supreme Islamic source, it appears inherently connected with its notions of God and humanity — and all these notions, as we have seen, have their roots in the transcendental realm..."

An important distinction to note, however, especially in the context of other animist traditions in the Himalayas, is that in Islam, nature is not worshiped, though it holds great importance as a sign of God's existence. The Qur'an teaches that "Allah is glorified by all those in the heavens and the earth" (Qur'an: Surah An-Nur 24:41).¹⁵ Being surrounded by nature is seen as a source of peace and tranquility, as it reminds individuals of God's presence and brings a sense of pleasure to the mind and heart. Overall, nature is highly valued in Islam as a sign of God's existence and a means of finding peace and connection with the divine.

Tawhīd

Another key tenet is Tawhīd or the interrelatedness of all things. The ecological sensitivity in Islam is grounded not in anthropocentrism or biocentrism but is predicated on the unity of all things. Dien (2003) further translates this to mean that there is no reality outside of the Absolute Reality, and there can be no scientific or

¹⁰ <https://myislam.org/surah-hashr/ayat-24/>

¹¹ <https://myislam.org/surah-al-anam/ayat-102/>

¹² <https://myislam.org/surah-rad/ayat-16/>

¹³ <https://myislam.org/surah-isra/ayat-99/>

¹⁴ <https://myislam.org/surah-taha/ayat-4/>

¹⁵ <https://myislam.org/surah-nur/ayat-41/>

intellectual effort that exists apart from the Absolute Reality. According to the wisdom of the Sufi¹⁶ poet Rumi (as cited in Clarke, 2003), Tawhīd is a holistic understanding of nature as “a system and process, with an overall meaning and end in which all parts have their place, without exception — whether they might be considered from a more limited point of view beneficial or deleterious, good or evil. The vision desired is, in a word, ecological — *an ecology that includes not only biology and physics, but also metaphysics* [emphasis added].”

For the aspiring co-productive conservationist, it is instructive to contrast Tawhīd with the modern science of ecology, in which one encounters the technical term homeostasis, which means, in the tradition of mechanical engineering, a self-regulatory feedback mechanism. As long as ecology can be seen as a mechanical system, it can be conceived as something that can be managed scientifically, and like a machine it performs function but has no ultimate purpose. And the task for the modern environmentalist is to figure out how much damage an ecosystem can take and maintain that balance at “the edge of the abyss” by technological manipulation without challenging the growth orthodoxy on which capitalism rests (Quadir, 2013).

The authors’ observation at the grassroots level in Kargil reveal that divergent perspectives on growth are perhaps the biggest sticking point: while desirous of a better standard of living, many local people nonetheless reveal a deep-rooted ambivalence about growth and its environmental costs. There is still much reverence for the older, more harmonious way of life predicated on Tawhīd, which provided adequately while leaving a minimal ecological footprint.

Khalifa

One of the more controversial concepts in Islamic environmentalism is that of Khalifa or custodianship. The Qur’an says God has placed man as his vice-regent on earth, which begs the question of the nature of this vice regency: is it dominion, or is it trusteeship? “Lo! I am about to place a vice regent on earth” (Qur’an: Surah Al-Baqara. 2:30).¹⁷ Those who interpret it as dominion see in Khalifa parallels to Christianity, which also gives mankind dominion, and which has been interpreted as giving carte blanche to exploit nature for humanity’s ends. To this school of thought belong the Salafists, who, upon Islam’s initial encounters with modernity, saw an urgent need for technological progress to catch up with the western world. In order to elide the more troubling questions raised by the quest for parity, Salafists put modern science squarely within the Islamic tradition.

But according to Nasr (2000), Islamic science is about Tawhīd or unity of being, whilst modern science is about Takhdīr or fragmentation, and, therefore, there is a fundamental difference between the two. It is the former interpretation of the Islamic scientific tradition that also sees Khalifa as meaning ‘trusteeship’. In the Sufi tradition, understanding Allah as the Creator helps Muslims acknowledge His sovereignty and authority over all aspects of life. It also fosters a sense of gratitude and awe. The Qur’an strictly commands human beings not to destroy the Earth, highlighting the

¹⁶ A mystic body of religious practice found within Islam.

¹⁷ <https://myislam.org/surah-baqarah/ayat-30/>

importance of preserving and protecting the environment, as it contains the signs of God's presence and should be treated with reverence. This understanding encourages human beings to appreciate and respect the natural world, recognizing it as a manifestation of God's power and wisdom. "We did not create the heavens and the earth and everything in between for sport" (Qur'an: Surah Ad-Dukhan. 44:38).¹⁸

By reflecting upon the beauty and harmony of nature, individuals are encouraged to develop a deeper connection with their Creator. Furthermore, the Qur'an exhorts human beings to be humble and not wasteful. It reminds human beings that they will be held responsible for their actions, including how they interact with the environment. "And do not walk on the earth arrogantly. Surely you can neither crack the earth nor stretch to the height of the mountains" (Qur'an: Surah Al-Isra. 17:37).¹⁹ As a result of the primordial covenant between God, Adam and Eve in the Qur'an, human beings are bound to follow God's commands. Humanity, created in God's image, is theomorphic. But this comes with a moral burden that "lies not in its [humans] enjoying any higher power or control or authority among created beings; it lies rather in the fact that it is accountable before God, such as no other creature is" (Haq, 2001).

In summary, the Qur'an teaches that human beings have been appointed as custodians (Khalifa) of the natural world by God, and He had sent forth various messengers (Rasul) to carry this message. This responsibility stems from a covenant made in pre-eternity (Mithaq), where humans acknowledged their divine nature and committed to preserving the balance (Mizan) and order in the cosmos. This commitment to maintaining due measure (Qadr) towards God is considered the primary moral duty of humanity. "As for the earth, We spread it out and placed upon it firm mountains, and caused everything to grow there in perfect balance" (Qur'an: Surah Al-Hijr. 15:19).²⁰

Sharia

Sharia (way) is a guide derived from the Qur'an and Sunnah (prophetic tradition), from the Hadith (authentic sayings) of Prophet Mohammad, through the Isnad (chain of narration) of those sayings, bound by the authenticity of those sayings. The conservation of nature within Sharia is not just a recommendation but a duty. This is evident in several Qur'anic verses and Hadiths that discourage wastefulness (Israf). For example, the Qur'an states that waste is an action of Satan (Qur'an: Surah Al-Isra. 17:27),²¹ and a Hadith narrates that the Prophet Muhammad said, "Do not waste water, even if you perform your ablution on the banks of an abundantly flowing river" (Ibn Majah, Vol. 1, Book 1, Hadith 425).²² These teachings promote a sustainable and balanced approach to using natural resources, emphasizing moderation and efficiency.

Furthermore, Sharia includes specific regulations regarding the use of land, water, and air, as well as the treatment of animals. It prohibits the pollution of water sources, the cutting down of trees without just cause, and cruelty to animals, among other environmentally harmful actions. The concept of "Hima," a protected area for

¹⁸ <https://myislam.org/surah-dukhan/ayat-38/>

¹⁹ <https://myislam.org/surah-isra/ayat-37/>

²⁰ <https://myislam.org/surah-al-hijr/ayat-19/>

²¹ <https://myislam.org/surah-isra/ayat-27/>

²² <https://sunnah.com/ibnmajah:425>

conservation and sustainable use, is an example of an early Islamic environmental practice. Sharia also encourages the preservation of biodiversity and balance (Mizan) among all living things, as mentioned in the Qur'an (Surah Ar-Rahman. 55:7-9).²³ This balance is essential for the well-being of the planet and is a trust that Muslims are expected to uphold.

The History of Islam in Ladakh

Having laid out the bare bones of Islamic environmental philosophy, it would be helpful to understand the channels through which these ideas made their way to the Ladakhi context. As one can see in this section, the incursion of Islam was, for the large part, peaceful, and conversions were mostly voluntary. This begs the question of what the convert felt Islam could offer him or her, particularly in a land where the struggle for survival was far more intense than in the salubrious environment of the rest of the Indian subcontinent. And, if an Indigenous person voluntarily opts for and adapts foreign ideas to meet his/ her needs, must those ideas forever be considered foreign? (It would also be worthwhile, at this juncture, to echo the sentiments of the authors of *Muslim Communities and Cultures of the Himalayas* to wonder why, when discussing a minority group, the impulse is always to account for and justify their existence) (Fewekes and Sijapati, 2021).

There is no master narrative of the emergence of Islam within the Himalayan region, though Muslims have a long presence in the region, dating back to at least the 10th century. Within Ladakh, the story of Islam is an especially layered and complex narrative, with cultural influences from Baltistan, Turkistan, Kashmir, Tibet and Persia shaping Islamic life in the region. In a porous and frequently acephalous border region, there is no single school of Islamic thought easily matched against a single ethnic group. Instead, the history reads like a palimpsest, with multiple overlapping stories, from which one may discern an intelligible narrative only with great difficulty. Nonetheless, an effort was made in the mid-1990s by the social anthropologist Pascale Dollfus (1995), and it is from her work that we present the following history. The first mosque in the region was built in Srinagar at the site of a Buddhist temple by Riñcana Bhatta, the son of a Tibetan chief, who converted to Islam in 1320 C.E. In the centuries that followed, Turkish invaders from the regions surrounding Ladakh, be it Kashmir or Kashgar, made multiple forays into the wealthy kingdom, often with success, yet always of a temporary nature. Islam gained a more lasting foothold in Purig, the ancient name for Kargil, then a region abutting the Ladakhi kingdom, with the 1405 C.E. invasion of Sultan Sikander Shah of Kashmir.

At the end of the 16th century, Kashmir was conquered by the Mughals, bringing the mighty empire to the doorstep of Ladakh. At the beginning of the 17th century, the king of Ladakh made an alliance with the Muslim chief of Skardu in neighbouring Baltistan, who offered his daughter in marriage on the condition that the king convert to Islam and that the son born of this marriage be the sole heir to the throne. The Balti princess, Rgyal Khatun, brought with her many Shia clerics, including Mir Syed Ali Hamdani, whom Ladakhi tradition credits with building the first Shia mosque in Shey, the former capital. (According to John Bray (2013), scholarship by Wolfgang

²³ <https://myislam.org/surah-ar-rahman/>

Holzwarth challenges this narrative by crediting the Nurbakshi Shams ud-Din Iraqi with making the first converts in the region.) Rgyal Khatun is particularly revered in Shia-majority Kargil, where many descendants of her retinue eventually settled. The king also invited prominent Kashmiri merchants to settle in Ladakh. The son born of this union, Raja Senge Namgyal, himself a devout Buddhist, is revered by Ladakhis as their greatest king.

In 1638 C.E, Mughal forces from Kashmir invaded Baltistan, in reprisal for which the Ladakhi king banned Kashmiri traders from his kingdom. The ban on Kashmiri traders imperilled Ladakh's strategic position as a trading entrepôt, throwing the economy in disarray, and the kingdom went into decline.

In 1679 C.E., a powerful Mongolo-Tibetan army was sent by the Dalai Lama in Lhasa to bring Ladakh back under the Tibetan fold. Unable to repel the army on his own, the Ladakhi king was forced to ask the Mughal governor of Kashmir for assistance. Once more, the king of Ladakh was forced to convert to Islam, and his son was taken hostage in Kashmir. Ladakh was brought under the suzerainty of the Mughal Empire, and Kashmiri traders settled in the region, establishing a chain of trade settlements along the caravan trail between Tibet, Central Asia and Ladakh. According to Dollfus (1995) and Grist (1995), it was through the ensuing proliferation of trade, rather than invasions or forced conversions, that Islam finally found a permanent home in Ladakh.

One of the outcomes of the 1684 peace treaty between Lhasa, Ladakh and the Mughals was the triennial mission from Ladakh to Lhasa known as Lo Phyag, which bore tribute to the Dalai Lama. As a sign of how integral Muslims had become to Ladakhi society, the management of all practicalities of the Lo Phyag were ceded to Muslim traders experienced in the Trans-Himalayan trade (Bray, 2013). Meanwhile, in Purig, where fewer Sunni Kashmiris had settled, the mostly Shia population continued to engage in agriculture.²⁴ During this era, interreligious unions, resulting in the conversion of Ladakhi women to Islam, continued unimpeded, and mosques were opened throughout the Himalayan kingdom (Dollfus, 1995).

In the era following Indian independence in 1947, Ladakh was cut off first from Baltistan owing to the formation of Pakistan, and then from Tibet and China following the Sino-Indian war. It lost its pre-eminence as a centre of trade, as well as its cosmopolitan nature, as many of its traders relocated elsewhere (Dollfus, 1995). It was administered as part of the state of Jammu & Kashmir, its concerns largely neglected in the face of the larger turmoil in that state. Since 2019, Ladakh has been bifurcated from Jammu and Kashmir and accorded separate status (Pushkarna, 2019). It has two districts, Leh and Kargil. Kargil is Muslim dominated and Leh is Buddhist dominated, though it also has a Muslim population.

²⁴ The demands of a sustainable agricultural practice in such a harsh region would have required a continued adherence to hard-won traditional ecological knowhow even after conversion. In her study of a Muslim community in the Nubra valley in the Leh district of Ladakh, anthropologist Smriti Srinivas (1995) observed that regardless of divergence in other aspects, both Buddhists and Muslims in the region "work according to a particular agricultural calendar which creates a degree of *conjunction* between them." Srinivas (1995) cites an observation made by a missionary in 1887 of a Muslim community in Kargil making offerings to the village deity and an imam practising *Sowa Rigpa* medicine, normally associated with Buddhism. This sort of syncretism is further evidence of the fuzzy boundaries of indigeneity in Ladakh.

Ladakhi Muslims today must negotiate a fine balancing act between their Ladakhi and Muslim identities, the latter of which, in the Internet age, is more shaped by the ideals of a global *ummah* or brotherhood than ever before. Nonetheless, the interplay of these multiple cultural influences - tribal, ethnic, religious, modern, Indian etc. - intermediates their relationship with the natural environment in which they live. And while attention has been given to the other aforesaid influences, curiously none has been paid to the influence of modern Islamic environmental thought, which oversight we shall go on to address in the next section.

Muslim Environmentalism among the Dard-Shin Scheduled Tribe in Kargil

As an illustrative example of how the Indigenous Peoples or Scheduled Tribes of Ladakh apply Islamic environmental thought in conducting their daily lives, this section focuses on the Dard-Shin tribe of Kargil (also referred to in this article as the Shinas). The Dard-Shins are a semi-pastoralist tribe whose presence in the region between the Karakoram and Western Himalaya has been documented as far back as the 4th century B.C.E. by the Greek historian Herodotus. For this section, the authors are drawing on personal experience, in addition to the limited scholarly literature available. The Dard-Shins hold a profound reverence for nature, considering it not merely as a resource but as something sacred and divine that necessitates protection and preservation. Central to their belief system is the recognition of the interconnectedness between humans and the environment. This worldview transcends the mere material value of nature, recognizing it as an integral part of their spiritual and cultural identity. Consequently, hunting and harming wildlife are regarded as sins, aligning with a broader ethos that reveres all life forms.

The Bon²⁵ religion, prevalent in the region before the arrival of Islam, encompasses elements of animism that acknowledge the spiritual essence residing within nature. This spiritual belief system perceives inherent vitality and consciousness in natural entities, fostering a deep sense of respect and veneration (Vohra, 1982). Interestingly, despite the advent of Islam in the region, these Indigenous beliefs were not eradicated; instead, Islam rationalized these beliefs by incorporating the notion that all beings, including humans, are part of God's creation. This fusion of Indigenous beliefs with Islamic teachings led to a harmonious coexistence between the two, allowing for the preservation of traditional reverence for nature. The amalgamation of these ideologies underscored the idea that stewardship of the environment is a collective responsibility ordained by a higher power. This blend of spiritual wisdom and environmental consciousness emphasizes the need to safeguard nature not merely for utilitarian purposes but as a duty intrinsic to the Shina's cultural and religious heritage. This holistic perspective continues to inspire a harmonious relationship between the community and the natural world, advocating for the preservation of their sacred landscapes for generations to come.

²⁵ <https://www.britannica.com/topic/Bon-Tibetan-religion>

Hima

The concept of Hima as a protected area within Islamic theology is deeply intertwined with the historical practices of tribal and pastoral communities, reflecting a profound reverence for the environment and its inhabitants. The Shinas, nestled deep within the intricate landscapes of the Himalayas, embrace the principles of Hima as a core tenet of their cultural heritage. Central to their practices is the sacred commitment to refrain from the indiscriminate cutting of trees and the hunting of revered animals. This cultural ethos is not merely a customary guideline but an embodiment of their deep-rooted connection with the natural world, driven by a profound understanding of the ecological interdependence between humans and their surroundings.

For the Shina community, the sanctity of certain trees, e.g. juniper (*Juniperus communis*) trees, and the protection of specific animals, e.g. ibex (*Capra ibex*), go beyond utilitarian considerations; it embodies a sacred pact with their environment. These trees might hold historical or spiritual significance, serving as markers of communal identity or repositories of traditional wisdom. Similarly, the prohibition against hunting specific animals might stem from myths, folklore, or religious beliefs that confer a revered status upon these creatures. Their ancient religious ethos is deeply intertwined with the natural world, where sanctity is found in elements like trees and wildlife itself.

Water Management

When it comes to water management, it is not much of a leap to understand the appeal of comprehensive Islamic jurisprudence on water management to the Dard-Shins. Although the laws mostly developed in the hot deserts of the Middle East, the cold deserts of the Trans-Himalaya are no less water constrained, and the principles are universal. Within Islamic jurisprudence, water belongs to that group of resources that man holds in common. No legal person may try to own a river or sell or rent its water. Nonetheless, a person or group who applies his/their labour to clear the land or build an irrigation canal, get(s) ownership rights. Still, “this does not prevent other groups from using the land’s natural, unimproved resources”, as water is a scarce resource (Wilkinson, 1990). Foremost among the hierarchy of rights governing water use is the right to quench thirst. So, for example, a nomad passing through a village has a right to slake his thirst at the irrigation canals within that village, as long as that water is still in its pure, unpolluted state and he does not pollute the water or the area immediately around it. For the semi-pastoralist Dard-Shins, who often go up the mountains to graze herds of sheep or cows, the ability to help themselves to water without courting conflict would be appealing.

John C. Wilkinson (1990), a scholar of Islam, writes that Islamic water law, in principle at least, ensures that the powerful do not encroach on “the rights of the smallholder, and that the interests of the latter are taken into account when any major decisions are made.” In a relatively egalitarian society such as that of the Dard-Shins, where for the most part, landholdings are more or less the same across the population, the Islamic framework for water management would have been particularly useful. The traditional canal network of the Dard-Shins (and more generally the Ladakhis), often referred to as Kanat, represents a sophisticated communal water distribution system

and is rooted in a collective sense of responsibility and reciprocity. Through a combination of gravity-fed channels and diversion structures, this ancient system optimizes water utilization while minimizing wastage — a testament to the ingenuity of traditional engineering and resource management practices.

At the core of this canal system lies a communal ethos, where different clan houses collaborate in a rotational manner, each shouldering the responsibility of channelling water to the fields, plants, and trees during specific periods. This rotational approach reflects a meticulous organization and equitable distribution of water resources among the various stakeholders. The villagers also elect a water official to ensure that no field is unirrigated (Agarwal and Narain, 1997). Such a communal undertaking not only ensures fair access to water but also fosters a sense of solidarity and mutual cooperation within the community. The Kanat system is a good example of how a flexible Islamic jurisprudence can be appropriated by an Indigenous population to buttress and legitimate prior practices. It also challenges the image of a passive and isolated Indigenous population subject to the vicissitudes of rapacious outsiders; instead, here we see the Dard-Shins cherry-picking from various sources to take an active role in shaping how they manage the resources available to them.

Suggestions for Incorporating Islamic Environmental Principles

A feature of the Central Sector Scheme on the Conservation, Development and Sustainable Management of Medicinal Plants of the National Medicinal Plants Board of the Ministry of Ayush (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy) in India is the delineation of a Medicinal Plants Conservation and Development Area (MPCDA), which aims to facilitate the *in-situ* conservation of medicinal plants in their natural habitats. The concept of an MPCDA can easily be translated as Hima, and in so doing, it would be exponentially easier to explain its purpose to the Shinas. One can envision a more impactful co-planning and co-productive process where Shina community members show conservationists pre-existing Himas in the area, and conservationists eschew an MPCDA in favour of a Biodiversity Heritage Site (under the Biological Diversity Act, 2002²⁶) that is more or less coterminous with those Hima. The process would entail a degree of negotiation, but rather than introducing an entirely new concept in the foreign, secular language of science, why not build on what has come before?²⁷

²⁶ <http://nbaindia.org/uploaded/docs/biological-diversityact-ii.pdf>

²⁷ Were Community Conserved Areas (CCAs) ever to be accorded legally protected status under Indian law, they could also serve as a more effective model. As Avinashi (2023) of the Kalpavriksh foundation eloquently puts it, “Although, Protected Areas (PA) have been significant in saving certain species from the verge of extinction and protecting ecosystems from mega-development projects due to their legal status, but the inherent assumption concerning the nature of most PAs comes from the colonial notion of conserving biodiversity that separates humans from nature and leaves little to no space for co-existence. Alternatively, CCAs are territories that act as corridors for animal movement and can complement PAs with a focus on landscape management. Additionally, biodiversity conservation is not always a primary objective for communities; however, it is an integral part of their livelihoods or cultural beliefs by virtue of existing systems, which makes CCAs a key entry point in bridging the gap between local livelihoods with conservation. CCAs are also essential in maintaining ecosystem services such as soil conservation, water security, gene pools, and can facilitate linkages between agricultural biodiversity and wildlife, thereby providing larger water/landscape integration.”

Under Section 41(1) of the Indian Biological Diversity Act, 2002, every local body in a state shall constitute a Biodiversity Management Committees (BMCs)²⁸ within its area of jurisdiction for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats. Out of 98 gram panchayats (village councils), 55 BMCs²⁹ have been registered in Kargil until 2022, but they are largely inactive, partly because of a fundamental incomprehension as to their purpose, which is to transfer ownership and management of valuable resources to local communities. When planning the implementation of such schemes, it is proposed that Islamic terms such as Khalifa and Mizan should be deployed to facilitate communication. Additionally, a potential benefit of showing a willingness to engage with existing religious-cultural norms at the planning stage would be the possibility of winning over local religious leaders to the conservation cause. Having a local imam³⁰ advocate for Khalifa and Mizan would surely be more impactful than anything an outsider could do.

As mentioned earlier, one of the most pressing issues facing the Dard-Shin population (and Ladakh at large) is effective water resources management, given the increasing rate of glacial melt. Glaciers are the primary source of water in this region. The imperatives of economic development and infrastructure for trade and commerce have led to careless decisions, such as the placement of a national highway next to the Parkachik glacier. Islamic law defines the area within 20 to 35 kilometres of Mecca and Medina as Harām, meaning it is an inviolable sanctuary. One could imagine a scenario whereby the elected members of the Ladakh Autonomous Hill Development Council in Kargil or the administration of the Union Territory define the area around the glaciers similarly.

Conclusion

In a region such as Kargil in the Trans-Himalaya, where the modern State has only recently encroached, modernity and science have far less legitimacy than older, more established belief systems that are not incompatible with the former. The Indigenous residents of this region have a long history of interacting with the larger world and have skilfully appropriated from foreign ideologies and religions where it has helped strengthen Indigenous systems for survival in a very harsh environment. Conservationists who wish to enlist the active participation of these communities are, therefore, well-advised to involve them in all stages of the co-productive conservation process. That can be best achieved by showing an appreciation and understanding of traditional knowledge and resource management systems. It would also require that practitioners familiarize themselves with Islamic thinking on environmentalism and sustainability. Having the ability to co-opt religious leaders and thinkers into the conservation cause, to engage them as active partners in the conservation process, listening respectfully to their opinions and taking them into account when designing an intervention, enlisting their participation in delivering the conservation message to the community at large, as well as jointly assessing the success of such collaboration will

²⁸ As of 23 January 2024, there were 4658 BMCs in Jammu & Kashmir UT
[<http://nbaindia.org/content/20/35/1/bmc.html>]

²⁹ <https://ladakh.gov.in/advisor-ladakh-chairs-the-first-meeting-of-ladakh-biodiversity-council-directs-for-the-immediate-constitution-of-biodiversity-management-committees/>

³⁰ The person who leads prayers in a mosque.

go a long way towards ensuring more impactful outcomes in the Trans-Himalaya.

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Authors' Declarations and Essential Ethical Compliances

Authors' Contributions (in accordance with ICMJE criteria for authorship)

Contribution	Author 1	Author 2
Conceived and designed the research or analysis	Yes	Yes
Collected the data	Yes	Yes
Contributed to data analysis & interpretation	Yes	Yes
Wrote the article/paper	Yes	Yes
Critical revision of the article/paper	Yes	No
Editing of the article/paper	Yes	No
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Research involving human bodies or organs or tissues (Helsinki Declaration)

The author(s) solemnly declare(s) that this research has not involved any human subject (body or organs) for experimentation. It was not a clinical research. The contexts of human population/participation were only indirectly covered through literature review. Therefore, an Ethical Clearance (from a Committee or Authority) or ethical obligation of Helsinki Declaration does not apply in cases of this study or written work.

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The author(s) solemnly declare(s) that this research has not directly involved any local community participants or respondents belonging to non-Indigenous peoples. Neither this study involved any child in any form directly. The contexts of different humans, people, populations, men/women/children and ethnic people were only indirectly covered through literature review. Therefore, an Ethical Clearance (from a Committee or Authority) or prior informed consent (PIC) of the respondents or Self-Declaration in this regard does not apply in cases of this study or written work.

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SELF-DECLARATION FORM

Research on Indigenous Peoples and/or Traditional Knowledge

1. Conditions of the Research

1.1 Was or will the research (be) conducted on (an) Indigenous land, including reserve, settlement, and land governed under a self-government rule/agreement or?

No

1.2 Did/does any of the criteria for participation include membership in an Indigenous community, group of communities, or organization, including urban Indigenous populations?

No

1.3 Did/does the research seek inputs from participants (members of the Indigenous community) regarding a community's cultural heritage, artifacts, traditional knowledge, biocultural or biological resources or unique characteristics/practices?

Yes, one of the coauthors is Indigenous

1.4 Did/will Aboriginal identity or membership in an Indigenous community used or be used as a variable for the purposes of analysis?

No

2. Community Engagement

2.1 If you answered "Yes" to questions 1.1, 1.2, 1.3 or 1.4, have you initiated or do you intend to initiate an engagement process with the Indigenous collective, community or communities for this study?

Yes

2.2 If you answered "Yes" to question 2.1, describe the process that you have followed or will follow with to community engagement. Include any documentation of consultations (*i.e., formal research agreement, letter of approval, PIC, email communications, etc.*) and the role or position of those consulted, including their names if appropriate:

We work at the grassroots level with this community, but it's on an informal basis. Even though the Dard-Shins are classified as a Scheduled Tribe, this classification comes with varying

degrees of autonomy, and in Kargil, this particular group is well integrated into the mainstream of society, so there is no need for any special permission to interact with them.

3. No Community Consultation or Engagement

If you answered “No” to question 2.1, briefly describe why community engagement will not be sought and how you can conduct a study that respects Aboriginal/ Indigenous communities and participants in the absence of community engagement.

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